

7w



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/086,579 | 02/28/2002 | Bernd Lamberts | SJO919980105US1 | 9017 |

7590 03/30/2005

DAVID W LYNCH
CRAWFORD MAUNU PLLC
1270 NORTHLAND DRIVE
SUITE 390
MENDOTA HEIGHTS, MN 55120

| |
|----------|
| EXAMINER |
|----------|

FIGUEROA, NATALIA

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2651

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,579

Applicant(s)

LAMBERTS, BERND

Examiner

Natalia Figueroa

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8,9 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 3,7,10 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Examiner suggests the applicant examines in claim 1, line 3. It reads, "measuring a write width for all a plurality of heads in a disk drive", examiner suggests measuring a write width for all of a plurality of heads in a disk drive". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-6, 8-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohinata et al (USPN 6,198,583), hereinafter Ohinata.

RE claim 1, Ohinata discloses a method for reducing the servo position error signal non-linearity during self-servo writing, comprising measuring a write width for all a plurality of heads in a disk drive (col. 6, lines 28-30 and col. 1, line 18); and adjusting a write current for each head in the disk drive toward a predetermined level (col. 3, lines 21-24 and col. 5, lines 34-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the method as disclosed by Ohinata. As disclosed by the Ohinata reference increasing the number of disks can increase the capacity of an HDD, hence

Art Unit: 2651

increasing the number of heads. One skilled in the art would find obvious to repeat the action of measuring for all the heads.

RE claim 2, Ohinata further discloses determining a mean track propagation width for the disk drive, the predetermined level establishing a mean track propagation (column 6, lines 43-51).

RE claim 4, Ohinata further discloses the step of verifying the optimal performance is achieved using the adjusted write currents (column 6, lines 20-23).

RE claim 5, Ohinata further discloses the verifying further comprises repeating the measuring and adjusting until a track propagation for the disk drive meets a predetermined criteria (column 3, lines 30-31).

RE claim 6, Ohinata further discloses the predetermined criteria comprises a predetermined minimum threshold (column 5, lines 25-26, the minimum track width is TA).

RE claim 8, Ohinata discloses a disk drive, comprising a plurality of data storage media mounted for simultaneous rotation about an axis (column 1, line 18); an actuator for moving each of a plurality of heads relative to an associated data storage media for reading and writing data to the associated data storage media (column 7, lines 65-67 and column 8, lines 1-3), and a disk controller for writing a data pattern to respective data storage media utilizing each of the plurality of heads, wherein the disk controller measures the write width for each of the plurality of heads (col. 6, lines 28-30, col. 1, line 18) and adjusts a write current for each of the plurality of heads toward a predetermined level (col. 3, lines 21-24 and col. 5, lines 34-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the method as disclosed by Ohinata. As disclosed by

Art Unit: 2651

the Ohinata reference increasing the number of disks can increase the capacity of an HDD, hence increasing the number of heads. One skilled in the art would find obvious to repeat the action of measuring for all the heads.

RE claims 9 and 11-13, apparatus claims 9 and 11-13 are drawn to the apparatus corresponding to the method of using same as claimed in claims 2 and 4-7. Therefore apparatus claims 9 and 11-13 correspond to method claims 2 and 4-7, and are rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

4. Claims 3, 7, 10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments, see pages 5-7, filed 01 December 2004, with respect to the rejection(s) of claim(s) 1 and 8 under 35 USC § 102 have been fully considered but are not persuasive.

Applicant argues, "Ohinata therefore fails to disclose, teach or suggest measuring the write width for a plurality of heads in a disk drive." Examiner disagrees because Ohinata does teach a stack of multiple disks and it also teaches measuring the width of a recording head. The reference does teach the executing of the actual operation.

Applicant also argues that it, "fails to disclose, teach or suggest adjusting a write current toward a predetermined level for each head of a plurality of heads in a disk drive". The arguments are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Figueroa whose telephone number is (571) 272-7554. The examiner can normally be reached on Monday - Thursday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


NFM


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600